



*Image: Sheep on the hills in the Scottish Borders*



# Scholarship

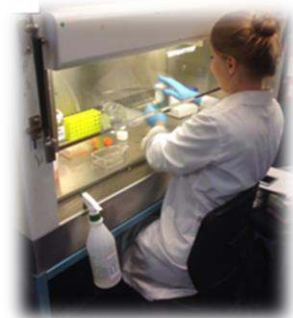
# 2015 Winner

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# Overseas Study Tour: Learning the Practical Methodology behind HIR Technology

EMILY EDWARDS (PHD STUDENT & GRADUATE TRAINEE – ROYAL AGRICULTURAL UNIVERSITY)

*“I was able to gain an in-depth understanding of the HIR technology from a practical and theoretical perspective, as well as how the technology can be directly applied to combat infectious diseases such as Johne’s.”*



The High Immune Response (HIR) technology is a genetic tool which can be used in dairy cattle breeding in order to promote disease resistance. It has been found that HIR traits are 30% heritable (in line with production traits) and is therefore a successful method to improve immunity at a fast rate. Research has shown that HIR application can reduce the incidence of mastitis, metritis, retained placenta and displaced abomasum. Whilst preliminary studies have been carried out, the use of the HIR technology has not yet been investigated in terms of diseases caused by Mycobacterium such as Johne’s and Bovine Tuberculosis.

The study tour enabled Emily to undertake practical experiments using cattle with HIR EBV’s which, due to current restrictions on the HIR test in the UK, could only be undertaken in Canada. Emily spent three months at the University of Guelph, where she was taught about how the HIR test works as well as carrying out a small research project.